

Case Report

Hematemesis due to double sources: a case report of epistaxis following gastric ulcer

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Background: Epistaxis is a common condition that can sometimes be overlooked. It usually presents with obvious symptoms but could also present as hematemesis and melena.

Case Presentation: A 78-year-old man presented to our emergency department with melena and shock. Initial endoscopy revealed a bleeding gastric ulcer. However, he had recurrent episodes of hematemesis and melena following coagulation therapy, and a repeat esophagogastroduodenoscopy could not identify the source of bleeding for more than 1 week. Epistaxis from nasal polyps was identified as the cause of hemorrhagic shock. Posterior nasal packing was carried out with Foley catheters, and an endoscopic sinus surgery was finally performed.

Conclusion: We report a case of epistaxis that caused hematemesis and melena following gastrointestinal bleeding. The diagnosis of epistaxis might have been delayed due to anchoring bias. Clinicians should be aware that epistaxis can mimic upper gastrointestinal bleeding and remember this important differential diagnosis.

Key words: Epistaxis, gastrointestinal bleeding, hematemesis, melena, nasal polyp

INTRODUCTION

HEMATEMESIS AND MELENA are the most common symptoms of acute upper gastrointestinal bleeding.¹ The emergency physician considers this diagnosis first in patients showing these symptoms. Epistaxis is a common disorder and presents with clinically obvious symptoms in most cases; however, it can also present with hematemesis and melena.² There are few published reports on the coexistence of epistaxis and gastrointestinal bleeding. In this article, we report the case of a 78-year-old patient with hematemesis who was eventually found to have both a gastric ulcer and epistaxis. The patient experienced repeated hematemesis and melena for more than 1 week immediately following gastric ulcer hemostasis and went into hemorrhagic shock.

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CASE PRESENTATION

A 78-year-old man presented to our emergency department (ED) with a complaint of melena for 2 days. He had a medical history of cerebral infarction, which had been treated with 100 mg/day aspirin, hypertension, and duodenal ulcer. He stopped taking aspirin on the day before arrival at our ED. His blood pressure was 77/53 mmHg, with a heart rate of 90 b.p.m. and a respiratory rate of 18 breaths/min. The Glasgow Coma Scale score was E4V4M6, and his body temperature was 36.7°C on arrival. Physical examination showed significant facial and conjunctival pallor. Laboratory findings revealed anemia (Hb, 6.4 mg/dL) and high blood urea nitrogen to creatinine ratio (62 mg/dL and 1.25 mg/dL, respectively). Given his symptoms of anemia and melena, upper gastrointestinal bleeding was suspected as the cause of hemorrhagic shock.

Transfusion with 2 units of red blood cells was initiated in the ED. An esophagogastroduodenoscopy (EGD) revealed a gastric ulcer with a visible vessel. The heat probe coagulation method was undertaken immediately to treat the visible vessel in the base of the gastric ulcer (Fig. 1).

On day 6 and day 8 following his admission, the patient suffered massive hematemesis. He underwent a repeat EGD accordingly, the result of which was unremarkable. On day

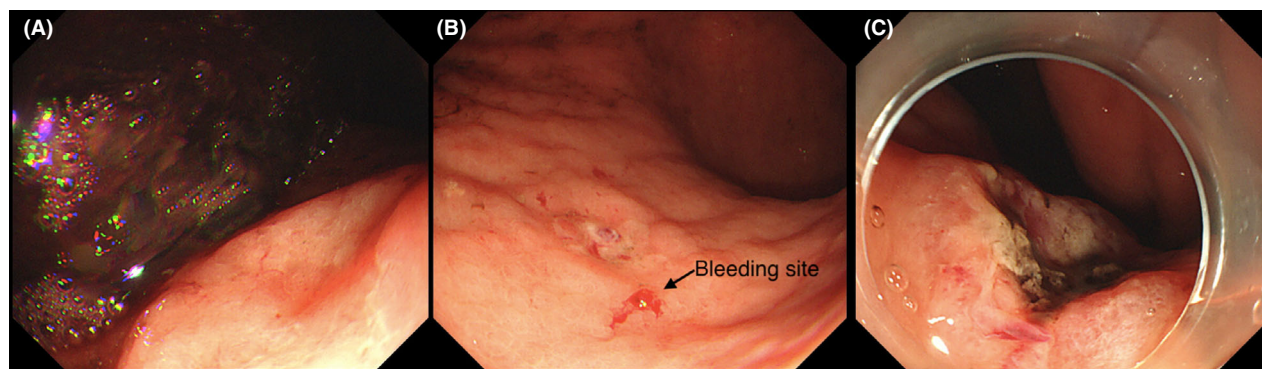


Fig. 1. Esophagogastroduodenoscopy findings of a 78-year-old man with melena. A, Large amount of coagulum in the stomach. B, C, There was an elevated lesion with excavation as well as a peptic ulcer that resembled a Dieulafoy's lesion with a visible vessel in the body. The peptic ulcer was judged as the bleeding site and hemostasis by electrocoagulation was carried out.

11 after admission, he had recurrent massive hematemesis along with passing of black stools. He had no nasopharyngeal symptoms. His circulatory status was again compromised with blood pressure of 74/56 mmHg and heart rate of 124 b.p.m. Hb decreased from 8.9 to 7.6 g/dL, but no coagulopathy developed. He was intubated, and 6 units of red blood cells and 8 units of fresh frozen plasma were given. Esophagogastroduodenoscopy did not reveal any obvious source of bleeding in the upper gastrointestinal tract. However, fresh blood was incidentally noticed to be dripping from the pharynx into the esophagus and stomach. Posterior nasal bleeding was strongly suspected, and we carried out posterior nasal packing on both sides with Foley catheters. Transnasal endoscopy revealed nasal polyps with bleeding in the right superior nasal meatus. Endoscopic sinus surgery for cauterizing the bleeding sites was carried out (Fig. 2). He developed a hemorrhage again and underwent endoscopic sinus surgery for radical treatment to the nasal polyps

on day 16. The pathological diagnosis was “nasal polyp,” characterized by an infiltration of inflammatory cells including neutrophilic leukocytes, lymphocytes, and plasma cells, and epithelial metaplasia. It is important to note that, throughout his hospitalization, he did not have coagulopathy or thrombocytopenia.

The patient had an uneventful postoperative course during the rest of his hospital stay and was discharged on day 26.

DISCUSSION

OUR PATIENT WAS found to have epistaxis after an initial bleeding gastric ulcer was diagnosed. Given that this patient had a gastric ulcer on admission, we suspected recurrent gastric ulcer as the cause of hematemesis and melena that developed during the hospitalization. Thus, the patient had to undergo multiple EGDs by the time a correct diagnosis of epistaxis was established as the cause of

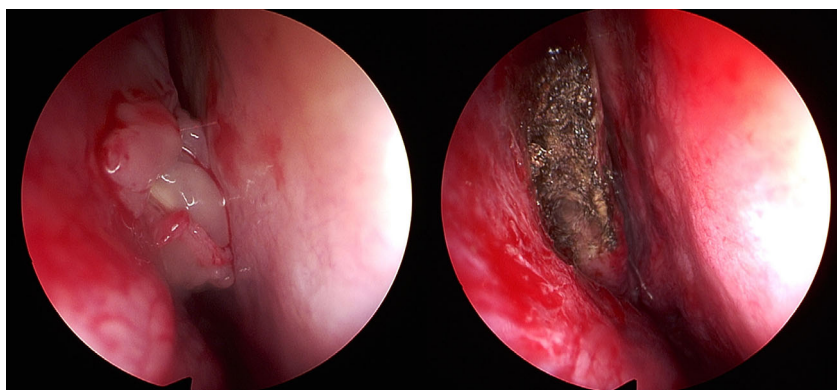


Fig. 2. Intraoperative findings of a 78-year-old man who underwent endoscopic sinus surgery for hemostasis of epistaxis. Bleeding nasal polyps were seen in the right superior nasal meatus. The nasal mucosa easily bled. Argon plasma coagulation was carried out to achieve hemostasis.

hematemesis and melena. The co-occurrence of upper gastrointestinal bleeding and epistaxis is rare and can mislead clinicians in terms of diagnosis.

More than 90% of cases of epistaxis occur in the anterior part of the nose, the site called Kiesselbach's area; the remaining 10% occur in the posterior part of the nasal cavity.³ Although most anterior bleeding is clinically obvious, posterior bleeding can have confounding symptoms such as nausea, hematemesis, anemia, hemoptysis, or melena.² Although epistaxis generally has a good prognosis, it can occasionally become life-threatening, as seen in this patient. Approximately 1.6 of 10,000 patients with epistaxis require hospitalization.⁴ Epistaxis in the acute phase rarely leads to death, the cause of which is usually massive hemorrhage, aspiration, or airway obstruction.⁵ Initial assessment of the patient's airway, breathing, and circulation is important; when there is evidence of clinical instability, hemodynamic stabilization and airway management should be undertaken prior to the cessation of epistaxis.⁶

Epistaxis can occasionally mimic upper gastrointestinal bleeding; it can be the cause of unexplained hematemesis or melena. A study reported that 0.55% of incidents of epistaxis show symptoms suggesting apparent upper gastrointestinal bleeding, that is, hematemesis and melena.⁷ Another study showed that epistaxis was diagnosed in 4.3% of cirrhotic patients hospitalized for suspected severe upper gastrointestinal bleeding.⁸ In these studies, none of the patients were found to have active bleeding and stigmata of recent hemorrhage in the upper gastrointestinal tract. In our case, gastric ulcer was initially diagnosed and treated with coagulation. However, the patient continued to have recurrent episodes of hematemesis, and the cause could not be identified by EGD. He had in fact developed epistaxis subsequent to the gastrointestinal bleeding in a remarkably short time; the gastrointestinal bleeding on arrival concealed the cause for hematemesis after his admission.

The diagnosis of epistaxis in our case was delayed possibly due to anchoring bias. Anchoring bias is a common cognitive bias, which is defined as the tendency to be attached to particular initial traits of a presentation very early when diagnosing, making it difficult to correct errors afterwards.⁹ The initial diagnosis of gastric ulcer on arrival at the ED became the "anchor," and we were convinced that hematemesis on days 6 and 8 was due to the gastric ulcer, despite the absence of bleeding on EGD. To avoid such an error, we should recognize this phenomenon and consider other causes of the disorder.⁹ We should have suspected epistaxis on days 6 and 8 when we did not find any bleeding source in the upper gastrointestinal tract. The patient had coexistence of upper gastrointestinal bleeding and epistaxis.

Widely known as Hickam's dictum, this coexistence of multiple etiologies in elderly patients is common, which clinicians should keep in mind. It is also reasonable that aspirin might be associated with the onset of epistaxis¹⁰ or that its long-acting antiplatelet effect might have exacerbated the otherwise subtle bleeding from the nasal polyps.

CONCLUSION

WE REPORT A case of epistaxis that caused hematemesis and melena in a patient who recently had a bleeding gastric ulcer; our diagnosis might have been delayed due to the anchoring bias. Clinicians should be aware that epistaxis can mimic upper gastrointestinal bleeding, and this should be sought for when there is no evidence of bleeding in the upper gastrointestinal tract.

DISCLOSURES

Approval of the research protocol: N/A.

Informed consent: Informed consent was obtained from the patient.

Registry and registration no. of the study/trial: N/A.

Animal studies: N/A.

Conflict of interest: None declared.

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